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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,460	12/19/2000	Gary R. McLuen	NEI-00105	8839

7590

11/04/2005

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EXAMINER

GORDON, BRIAN R

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,460

Applicant(s)

MCLUEN ET AL.

Examiner

Brian R. Gordon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8-22-05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-43 and 45-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-43 and 45-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-17-05; 7-20-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 22, 2005 have been fully considered but they are not persuasive. Applicant basically presents the same arguments for all of the previous rejections of the prior Office action. Applicant recites neither Johnson nor Hashimoto teach coupling a waste tube to a selective one of a first drain and second drain by moving the waste tube to a selective one of the drains. Applicant also provides details as in the contrast of the teachings of Johnson and that disclosed in the specification of applicant. The claims are read in light of the specification but limitations of the specification are not incorporated and considered as claimed elements when absent therefrom. Applicant states the instant application teaches a multi-well rotary synthesizer including a controller, a plurality of precision fit vials circularly arranged in multiple banks on a cartridge, a drain corresponding to each bank of vials, a chamber bowl, a plurality of valves for delivering reagents to selective vials and a waste tube system for purging material from the vials. (Specification, p. 3, lines 8-111) The banks of vials can also be selectively purged, allowing the banks of vials to be used to synthesize different polymer chains. These details of the structure applicant intends to use to perform the method are not specified in the claims, hence the specified structure is not considered as patentable weight when considering the claim. If applicant intends for such structure to be required, applicant should amend the claims to include a step of providing the specific structure.

The claims are given their broadest interpretation. For example, claim 31 has a preamble that recites what is intended to be achieved by the method. Following the transitional phrase, the steps required are dispensing into one **or more** vials. A teaching of dispensing in any structure having one vial meets that step. As to the phrase to perform synthesis within the selective one or more of the plurality of vials, this is a statement of intention and not a positive step or requiring synthesis to occur. There are no synthesis steps required in the claims. The next step is coupling a waste tube to **one of** a first drain and second drain within a purging system. A prior art is not even required to have a second drain in order to meet such a limitation. A prior art teaching coupling a waste tube in a device with only one drain meets such a limitation. Coupling to a second drain is optional not a requirement of the method. As stated above applicant's claims do not specify providing a particular structure in which the method is performed. The last step of purging is directed to purging **one of** the first drain and second drain. The claim only requires one vial be present, in such an instance the one vial will be associated with one bank, and one drain...as such there is no structural requirements for a second bank nor drain.

In reference to the Johnson reference applicant states on page 2 of the remarks: "Johnson teaches that a shuttle means 90 is actuated to move the waste plate 230 in liquid communication with the sample plate 40." Which affirms that previously stated by the examiner. The waste plate is considered equivalent to a waste tube and the sample plate equivalent to vials or bank of vials having drain tubes. The waste plate is moved

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to the drain tubes. Therefore, the reference meets the requirements of the specified claims.

As to Hashimoto, applicant states (page 5): "Hashimoto does not teach coupling **the same** waste tube to a selective one of a first drain and a second drain by moving the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain." As stated above it appears applicant is contrasting the device what is intended be used in the method. However the particulars of the device are not required. The claim does not require coupling the same waste tube to both drains. It only requires a waste tube be connected to one drain. Whether a second drain is present or not is irrelevant and whether or not the waste tube is coupled to second drain is irrelevant. Use of a same tube to be coupled to both first and second claims is a moot point for there are no steps required in the claim for a single tube to be connected to a first and second drains.

A teaching of coupling a waste tube to one drain meets the limitation of the claims. There is no requirement or step to couple the same waste tube to a second vial, bank, nor drain.

Furthermore the term "associated" as applied in the claims is interpreted as not having specific structure. It simple means that in one manner or another the elements interact together, are connected together, regardless if it's directly or indirectly through other elements. It is suggested applicant amend the claim to clarify the structural meaning in relationship to the configuration the device intended to be used to perform the claimed method.

For the reasons given herein, the examiner hereby maintains the previous rejections.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 31-33, 42-43, 45, and 47-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. US 6,133,045.

Johnson et al. disclose a sample treatment system for automated extraction of compounds. The system includes a housing defining an enclosure including a top cover having an open ended well for allowing a sample plate (comprising wells i.e., banks of vials with drains) to nest therein, a automated shuttle means for lateral transportation and vertical lifting of both a waste (comprising waste tubes) and a collection plate to selectively address an area below the sample plate for the through passage of fluid from the sample plate and a digitally controlled variable speed vacuum pump operatively coupled to said housing for evacuating air from the enclosure to a degree below atmospheric pressure for through passage of fluid from the sample plate to either the

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waste plate or collection plate. The shuttle means includes motor drives and positive position feedback for precisely laterally and vertically positioning both the waste and collection plates (abstract)

At the outset of a sample treatment process the shuttle means will be controlled to move the waste plate (moving of waste tubes) underneath the sample plate (with wells having drains) via the coaction of the screw motor, lead screw shaft and lead screw block. A limit switch will provide positive feed back to the electronic control system in order to verify that the waste plate is properly indexed below the sample plate. At this time the electronic control system will actuate the cam motor to elevate the waste plate into communication with the sample plate (coupling waste tube to drains). The vacuum area of the chamber is then depressurized via the vacuum pump (creates pressure differential) apparatus and the waste liquid is pulled down from the sample plate (purging/expelling material from vial) and will flow through the waste plate and into the waste trough, out of the outlet port and then into a waste bottle. This waste removal process may be repeated depending on the sample being treated.

Once the waste from the sample plate has been properly disposed of, the electronic control system will actuate the screw motor to traverse the collection plate underneath the sample plate (uncoupling). A second micro-switch will feed back a signal to the control system when the collection plate is properly indexed below the sample plate. The electronic control system will then actuate the cam motor to lift the collection plate in communication with the sample plate and the vacuum pump apparatus will depressurize the vacuum area of the chamber for collecting the

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constituent or constituents of interest. Once the sample treatment has been completed the vacuum is released from the vacuum chamber and the top cover can be removed for retrieval of the collection plate for further sample analysis (column 3, lines 3-63).

The liquid handling system or robotic sample processor permits a wide range of liquid handling operations. To transfer and add liquids to, for example, a 96 well filter plate 40, a probe is mounted on an XYZ translator mechanism above a vacuum manifold apparatus 20. The probe or a plurality of probes (serial or parallel dispensing) may be translated in the X and Y dimensions above the structure and also may be raised and lowered in the Z dimension. Metered amounts of liquids can then be supplied to the plurality of columns arranged in an eight by twelve matrix forming the 96 well filter plate 40 (column 6, lines 3-13).

3. Claims 31, 42, 47, and 48 are rejected under 35 U.S.C. 102(a) as being anticipated by Hashimoto et al. WO98/00520.

Hashimoto et al. disclose an automatic testing apparatus with improved reliability of test results, capable of conducting automatically such operations as sterile testing, microorganism limit testing, insoluble particulate measurement testing, divided portion testing for chemical analysis and chemical reaction testing, etc., and capable of accommodating changes in the specimen or the test container with each sample as well as changes in operating procedures with each sample so as to eliminate the possibility of human error and prevent contamination of the operating environment by human hands, the automatic testing apparatus of the present invention prepares a sample by mounting a set of various pieces of equipment including the specimen or test containers

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required to be changed with every sample atop a same work base and providing that work base as a unit to within the operating range of a robot, with the robot then handling the various pieces of equipment atop the work base to prepare the sample (abstract).

Seen in Figures 16 and 17 is a device C11 for attaching and detaching caps to and from the bottoms of culture tubes comprises a support C11-1 provided on the table C14 for manipulating a variety of solutions to be placed on the work base; a horizontally movable cylinder base C11-2; a horizontally movable cylinder C11-3; a vertical cylinder C11-4; a base C11-5 for a device for attaching and detaching caps; a first device C11-6 for attaching and detaching a cap from the bottom of a culture tube; a second device C11-7 for attaching and detaching a cap from the bottom of a culture tube; a first drainage tube C11-8 and a second drainage tube C11-9 (moveable waste tubes). By operating said horizontally movable cylinder C11-3, said vertical cylinder C11-4 and said first and second devices C11-6 and C11-7 for attaching and detaching a cap to and from the bottom of a culture tube, the first bottom cap F14-10 of a first culture tube F14-2 (vial with drain) and the second bottom cap F14-11 of a second culture tube F14-3 can be detached and stored or attached. Said first and second drainage tubes C11-8 and C11-9 come below a discharge port (drain) of said first culture tube F14-2 and a discharge port of said second culture tube F14-3 to catch the drainage when said first and second bottom caps F14-10 and F14-11 are detached and stored.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 34-41, 46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. US 6,133,045.

As recited above, Johnson et al discloses each step of the claims except for the step of moving the drain tube to be coupled to the waste tube.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that once the waste has been collected from one sample plate.

The processed sample plate may be removed and replaced with another sample plate of the same format without moving the waste collection plate down from it's position thereby allowing the sample plate (comprising the drains) to be moved towards and coupled to the waste tube.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, with 2nd and 4th F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

brg


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